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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,371

05/15/2007

Roberto Lanzo

09952.0073

9215

22852

7590

05/26/2009

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EXAMINER

SARWAR, BABAR

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

05/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,371	Applicant(s) LANZO ET AL.	
	Examiner BABAR SARWAR	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-34 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. **Claim 17** is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **claim 26** of copending Application No. **10/588370**. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the limitations recited in the current application are transparently found in the copending application No. **10/588370** with obvious wording variations. The claims of the current application encompass the same subject matter except that the current application recites terms, for instance, "**Target second areas, remaining stretch of radio electric signal of propagation path**".

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Specification

3. The disclosure is objected to because of the following informalities: **Para 0038** of the specification mentions achieving the aim of the claimed invention defined in **claims 1, 16, and 17** which are cancelled claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation “cell coverage” in line 5. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

The examiner takes note that the applicant probably intended the claim language “the cell coverage”. For the purpose of examination, the examiner will assume the applicant meant to say “the cell coverage”.

Claim 18 recites the limitation “a region around” in line 6. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim 18 recites the limitation “the environment” in lines 10-11. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

The examiner takes note that the applicant probably intended the claim language “an environment”. For the purpose of examination, the examiner will assume the applicant meant to say “an environment”.

Claim 18 recites the limitation “the coverage” in line 9. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

The examiner takes note that the applicant probably intended the claim language “the cell coverage”. For the purpose of examination, the examiner will assume the applicant meant to say “the cell coverage”.

5. **Claims 1-17** have been cancelled as per **preliminary** amendments.
6. **Claims 18-34** are newly added claims.
7. **Claims 18-34** are currently pending.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18, 33-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Bernardin et al. (US 6,173,185 B1), hereinafter referenced as Bernard.

Consider **claim 18**, Bernard discloses a method for planning a radio communications network (**Abstract, where Bernard discloses determining the boundaries of cells and the associated reliability of the RF coverage within these boundaries**). Bernard discloses that computing cell coverage, to indicate a region around a radio base station where a radio electric signal radiating out from the radio base station copes with given requirements (**Abstract, where Bernard discloses the cell coverage reliability**); wherein computing cell coverage comprises: dividing a region around said radio base station into a number of first areas (**Figs. 1a, 1b, where Bernard discloses first areas i.e. cell edge**); dividing at least some of said first areas into a number of second areas; and for at least some target second areas of said second areas, computing respective quantities indicative of the coverage within said target second areas (**Fig. 1b, where Bernard discloses areas within cell edge with greater reliability**), each quantity being computed for the respective target second area as a function of data describing the environment between said radio base station and said target second area along a propagation path of a radio electric signal radiating out from said radio base station and passing through said target second area (**Fig. 1b, where Bernard discloses reliability values computed by propagation method**); each quantity being computed for the respective target second area as a function of data describing the environment within at least some second areas close to at least one of said radio base station and said target second area along the radio electric signal propagation path, and as a function of data describing the environment within at least some first areas along the remaining stretch of the radio electric signal propagation path

Art Unit: 2617

(Col. 4:24-26, where Bernard discloses fade margin, Col. 4:51-52, where Bernard discloses that the fading margin included in the measurements, Col. 4:58-63, where Bernard discloses that the cell reliability is based on received points within large area i.e. cell radius).

Consider **claim 33**, Bernard discloses everything claimed as implemented above (see claim 18). In addition, Bernard discloses that wherein a processing capable of being programmed to implement the method (**Fig. 5, where Bernard computer system to implement the method**).

Claim 34, as analyzed with respect to limitations as discussed in claim 33.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard in view of Olofsson (US 6,047,238), hereinafter referenced as Olof.

Consider **claim 19**, Bernard discloses everything claimed as implemented above (see claim 18). Bernard does not explicitly disclose that wherein computing a second quantity for a target second area comprises: checking availability of data describing the environment within at least some second areas close to said radio base station and said target second area; forming a mixed resolution environment profile describing the environment between said radio base station and said target second area along said

radio electric signal propagation path, said mixed resolution environment profile describing the environment within at least some second areas close to at least one of said radio base station and said target second area depending on environment descriptive data availability, and within at least some first areas along the remaining stretch of the radio electric signal propagation path; and computing said quantity on the basis of said mixed resolution environment profile.

Olof discloses that wherein computing a second quantity for a target second area comprises: checking availability of data describing the environment within at least some second areas close to said radio base station and said target second area **(Abstract, where Olof discloses detection of obstacles while generating paths profiles, therefore describing the environment and availability of data)**; forming a mixed resolution environment profile describing the environment between said radio base station and said target second area along said radio electric signal propagation path **(Fig. 1, where Olof discloses generation of paths and obstructions observed in radio electric signal propagation path)**, said mixed resolution environment profile describing the environment within at least some second areas close to at least one of said radio base station and said target second area depending on environment descriptive data availability, and within at least some first areas along the remaining stretch of the radio electric signal propagation path; and computing said quantity on the basis of said mixed resolution environment profile **(Figs. 4, 5, where Olof discloses total path profile separation and adjacent obstruction and generating path profiles based path profiles comparison)**. Therefore it would have been obvious to

Art Unit: 2617

one of ordinary skills in the art at the time the invention was made to modify Bernard with the teachings of Olof so as to improve the topographical data as discussed on **Col. 1:40-41**.

Consider **claim 20**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Olof discloses that wherein forming a mixed resolution environment profile comprises: identifying obstacles encountered by said radio electric signal within at least some first areas along the propagation path from said radio base station to said target second area; and forming the part of the mixed resolution environment profile describing the environment within at least some first areas along the remaining stretch of the radio electric signal propagation path so that said part describes the obstacles identified within said first areas (**Fig. 5, where Olof discloses generation, translation, transformation, and comparison of path profiles, therefore mixed resolution environment profile**).

Consider **claim 21**, the combination teaches everything claimed as implemented above (see claim 20). In addition, Olof discloses that wherein forming the part of the mixed resolution environment profile describing the environment within at least some first areas along the remaining stretch of the radio electric signal propagation path so that said part describes the obstacles identified within said first areas comprises: consolidating identified obstacles which are spaced apart one from another at a distance lower than a given distance; and forming the part of the mixed resolution environment profile describing the environment within at least some first areas along the remaining stretch of the radio electric signal propagation path so that said part

describes said consolidated obstacles (**Fig. 4, where Olof discloses translated and transformed path profiles**).

Consider **claim 22**, the combination teaches everything claimed as implemented above (see claim 20). In addition, Olof discloses that wherein obstacles encountered by said radio electric signal within at least some first areas along the propagation path from said radio base station to said second area are identified according to a stretched string technique (**Fig. 1, where Olof discloses propagation of primary and adjacent path profiles**).

Consider **claim 23**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Olof discloses that wherein forming a mixed environment profile comprises: forming a first end and a second end of said mixed resolution environment profile describing the environment within at least some second areas close to said radio base station and said target second area depending on environment descriptive data availability (**Fig. 1, where Olof discloses propagation of primary and adjacent path profiles**).

Consider **claim 24**, the combination teaches everything claimed as implemented above (see claim 19). In addition, Olof discloses that wherein computing said quantity on the basis of said mixed environment profile comprises: identifying obstacles encountered by said radio electric signal along the propagation path from said radio base station to said target second area on the basis of said mixed resolution environment profile; and computing said quantity on the basis of said identified

Art Unit: 2617

obstacles (**Fig. 5, where Olof discloses comparison of primary and adjacent path profiles**).

Consider **claim 25**, the combination teaches everything claimed as implemented above (see claim 24). In addition, Olof discloses that wherein said obstacles are identified according to a stretched string technique (**Fig. 3, where Olof discloses translated obstructions**).

Consider **claim 26**, the combination teaches everything claimed as implemented above (see claim 24). In addition, Olof discloses that wherein computing said quantity on the basis of said identified obstacles comprises: computing attenuation by diffraction on said identified obstacles of a radio electric signal radiating out from said radio base station along the propagation path to said second area, wherein computing attenuation by diffraction comprises: computing a first contribution due to orographic obstacles; computing a second contribution due to buildings; computing a third contribution due to vegetation; and computing said attenuation by diffraction as a weighted sum of said first, second and third contributions (**Figs. 3, 4, where Olof discloses total path profile separation and translated obstruction**).

Consider **claim 27**, the combination teaches everything claimed as implemented above (see claim 18). In addition, Olof discloses that wherein the environment within second areas close to said radio base station and said target second area along the radio electric signal propagation path is described by using a first resolution and the environment within first areas along the remaining stretch of the radio electric signal propagation path is described by using a second resolution lower than said first

resolution (**Fig. 1, where Olof discloses raster separation and raster points and points used in path profiles**).

Consider **claim 28**, the combination teaches everything claimed as implemented above (see claim 18). In addition, Olof discloses that wherein said data describing the environment within said second areas close to said radio base station and said second area along the radio electric signal propagation path include average ground altimetry, information as to the presence of a building, vegetation or nothing, and height of the building or vegetation (**Fig. 1, where Olof discloses obstructions perceived in path profiles**).

Consider **claim 29**, the combination teaches everything claimed as implemented above (see claim 18). In addition, Olof discloses that wherein said data describing the environment within said first areas along said at least part of the remaining stretch of the radio electric signal propagation comprises average ground altimetry (**Col. 6:12-19, where Olof discloses evaluating uncertainties of path profiles method**).

Consider **claim 30**, the combination teaches everything claimed as implemented above (see claim 29). In addition, Olof discloses that wherein a quantity for a respective second area occupied by a building is computed as a function of quantities computed for second areas surrounding the second area occupied by the building (**Fig. 4, where Olof discloses translation, transformation and comparison path profiles**).

Consider **claim 31**, the combination teaches everything claimed as implemented above (see claim 30). In addition, Olof discloses that wherein a quantity for a respective second area occupied by a building is computed as a weighted average of quantities

Art Unit: 2617

computed for second areas surrounding the second area occupied by the building (**Col. 6:12-19, where Olof discloses average and standard deviation, primary and worst adjacent**).

Consider **claim 32**, the combination teaches everything claimed as implemented above (see claim 31). In addition, Olof discloses that wherein said quantities computed for second areas surrounding the second area occupied by the building are weighted by using respective weights which are inversely proportional to the squared distance between the second area occupied by the building and the second areas surrounding the second area occupied by the building (**Col. 6:12-19, where Olof discloses average and standard deviation, primary and worst adjacent**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BABAR SARWAR whose telephone number is (571)270-5584. The examiner can normally be reached on MONDAY TO FRIDAY 09:00 A.M -05:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BS/

/BABAR SARWAR/
Examiner, Art Unit 2617

/NICK CORSARO/

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